

SUNDERHAUF, Frantisek, inz.

Determining the heating value of coal used in power plants
for establishment of the price of fuels. Energetica Cz 13
no.11:576-580 N'63.

1. Ustav pro vyzkum paliv, Bechovics.

L 44100-66

ACC NR: AP6009354 (A,N) SOURCE CODE: CZ/0078/65/000/011/0016/0016

AUTHOR: Sunderhauf, Frantisek (Engineer; Prague); Umlasek, Josef
(Engineer; Slapanice u Brna)

ORG: none

TITLE: Tubular wall for combustion chambers and boilers. CZ Pat.
No. PV 803-63

SOURCE: Vynalezky, no. 11, 1965, 16

TOPIC TAGS: combustion chamber, engine cooling system, ~~water~~

ABSTRACT: An Author Certificate has been issued for a gastight, tubular, panel wall designed for combustion chambers or boilers cooled by circulating water. It consists of tubes connected by special strips. The strips are bent parallel to the axes of the tubes and have protrusions which are perpendicular to the axes.

[KP]

SUB CODE: 21/ SUBM DATE: 13Feb63/

Card 1/1 *LL*

SUNDETUV, A.Zh.; ABAKOV, I.M.

Experience in the detection of malignant neoplasms. Trudy
Inst. klin. i eksp. khir. AN Kazakh. SSR 8:19-20 '62.
(MIRA 17:7)

SUNDETUV, U.D., inzh.

Gas control in coal mines in the Karaganda Basin. Bezop.truda v
prom. 4 no.11:10-11 N '60. (MIRA 13:11)

1. Gosgortekhnadzor Kazakhskoy SSR.
(Karaganda Basin--Mine gases)

200117. 8.

Some problems of the epidemiology and prophylaxis of hepatitis
in the Mongolian People's Republic. Vop.med.virus. no.9:136-
141 '64. (MIRA 18:4)

1. Zavedyashchiy kafedroy propedavtiki vnutrennikh bolezney
Mongol'skogo gosudarstvennogo meditsinskogo instituta.

ACC NR: AP6032524

(1)

SOURCE CODE: UR/0413/66/000/017/0119/0119

INVENTOR: Lokshin, A. L.; Mal'tsev, V. P.; Sundeyev, B. K.

ORG: none

TITLE: Thrust bearing. Class 47, No. 185635 [announced by Kaluga Turbine Plant (Kaluzhskiy turbinnyy zavod)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 17, 1966, 119

TOPIC TAGS: gas turbine, steam turbine, turbine bearing, turbine design, *antifriction bearing, thrust bearing*

ABSTRACT: The proposed thrust bearing for turbomachines, such as steam or gas turbines, contains a ring having rigidly fixed supports and pivoting, self-aligning

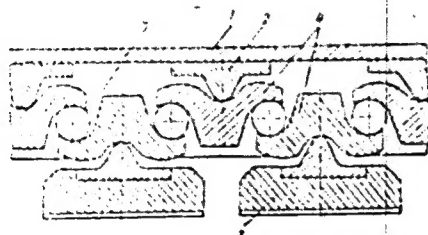


Fig. 1. Thrust bearing

1 - Ring; 2 - supports; 3 - supporting blocks; 4 - balancers; 5 - balls.

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UDC: 621.165+621.438-233.23

ACC NR: AP6032524

superior to a double-row system of interconnected balancers, resting both on the rigid supports and on pivoting support blocks. In order to increase reliability and supporting capacity, the supports and the supporting blocks have ribs, serving as pivoting axes for all moving parts of the bearing. Balls are placed between the balancers; the contact points of these balls are in a straight line with the balancer, perpendicular to the pivoting axis of the balancer and pass through the axis or below it (see Fig. 1). Orig. art. has: 1 figure.

SUB CODE: 1521/ SUBM DATE: 25Jan65/

Card 2/2

SUNDIKOV, B.I.. inzh.

Laying earth roadbeds in ever-frozen grounds. Avt.dor.
25 no.4:8-9 Ap '62. (MIRA 15:5)
(Road construction) (Frozen ground)

SHUMAKOV, D. I. Inzh.

Road construction with a precast concrete pavement. Avt. dor.
27 no. 7:16 JI '64. (MIRA 17:12)

SUNDIYEV, N.P., inzh.

Automatic cutoff of the electric motor in case of phase break.
Khol.tekh. 39 no.6:56 N-D '62. (MIRA 15:12)
(Electric motors—Safety appliances)

SUNDIYN BALDAN

Excretion of some nitrogen substances by abomasum glands of
sheep during various periods of pregnancy and lactation.

Izv. AN Kazakh. SSR. Ser. biol. nauk 2 no.6:53-57 N-D '64.

(MIRA 18:3)

DORDEVIC, Slobodan; SUNDRICA, Zdravko

Sanitary conditions in Dubrovnik and improvements proposed by Vlaho
Stulli to Marshal Marmont in 1808. Srpski arh. celok. lek. 89 no.10:
1225-1231 0 '61.

(HISTORY OF MEDICINE)

S

SUNDUKOV, A.

Scientific work of students, Nauka i pered. op. v. sel'khoz. 8
no. 7:77-79 J1 '58. (MIRA 11:8)
(Agricultural research)

SUNDUKOV, A.T.

Practices of reclaiming saline soils in an area with good
drainage. Trudy AN Tadsh. SSR 78:39-48 '57.

(MIRA 13:3)

(Vakhsh Valley--Alkali lands)

SUNDUKOV, I. N. and PREDVODITILEV, A. S., Dr. Sci., Cor.Mbr.AS USSR

"The Problems of Combustion and Flame Front Spreading in Two-Phase Mixtures (Liquid Fuel + Air)," a paper presented at the 6th International Conference on Combustion, New Haven, 19-24 August 1956

Inst. of Energetics, Moscow, AS USSR

A-52806, 9 Jul 56

POPKOV, V.I., otv. red.; VINTER, A.V., akademik, red. [deceased]; VEYTS, V.I., red.; PREDVODITSELEV, A.S., red.; STYRIKOVICH, M.A., red.; CHUKHANOV, E.F., red.; BOGDANOVA, N.B., kand. tekhn. nauk, red.; KOZLOV, B.K., kand. tekhn. nauk, red.; LEBEDEV, M.M., kand. tekhn. nauk, red.; SUNDUKOV, I.N., kand. tekhn. nauk, red.; ANTRUSHIN, B.D., red. izd-va; DUBKOV, P.V., red. izd-va; ZUBKOV, P.I., red. izd-va; MOYZHES, S.M., red. izd-va; PRUSAKOVA, T.A., tekhn. red.

[Problems of power engineering; symposium dedicated to Academician G.M. Krzhizhanovskii] Problemy energetiki; sbornik posviashchaetsia akademiku G.M. Krzhizhanovskomu. Moskva, 1959. 851 p.

(MIRA 12:12)

1. Akademiya nauk SSSR. Energeticheskiy institut. 2. Chleny-korrespondenty AN SSSR (for Popkov, Veyts, Predvoditelev, Styrikovich, Chukhanov).

(Power engineering)

24(6) YEAR I EYE EXPLOSION 1971/301

Abdullaev M.M. BSH. Emergency Institute

Guadalajara City, Mexico. (The Dynamics and Physics of Combustion) Moscow, 1969, 179 p. Errors all inserted, 5,000 copies printed.

Step. M.I. A.S. Prodyktor, Corresponding Member, USSR Academy of Sciences; M.I. Publishing House; A.L. Smolovskiy; Tech. M.I. I.B. Chernov.

PREFACE: The book is intended for specialists and engineers in various industries, interested in gas dynamics, combustion physics and related fields.

CONTENTS: This collection of articles represents the first attempt of the laboratory to investigate explosions were flow processes of combustion and explosion. The collection contains thirteen articles by personnel of the combustion laboratory of the Power Engineering Institute, Academy of Sciences, USSR, which treat the following aspects of combustion: 1) problems of turbulent combustion of gas mixtures; 2) the influence of turbulence of flow on the combustion process of gas mixtures; 3) theoretical investigations of combustion in hydrodynamic theories of combustion and explosion, and the influence of turbulence on the combustion process; 4) the influence of turbulence on the combustion process in special cases characterized by the fractal wave motion process. The articles previously offer a new foundation to the identical and identical conditions of wave motion of sub- and permit their generalization to the case of varying dissipation of these or other physical quantities of an explosion wave front. No generalizations are mentioned. References accompany each article.

POKHOD, V.I. Some Properties of Supersonic Flow	69
LOBOV, V.P. Supersonic Flow in the Region of an Angular Battress	79
LOBOV, V.P. Supersonic Flow Under Conditions of Resonance in Shaped Nozzles During a Change of Reynolds Number	84
MAZUROVA, T.V. and LUKOTYEV, L.S. Methods of Measuring the Field of Density of Three-Dimensional Objects With the Aid of the Taylor Method	88
MAZUROVA, T.V.; LUKOTYEV, L.S.; and POKHOD, V.I. Experimental Investigation of the Field of Density of a Three-Dimensional Supersonic Stream	92
KOROTAYEV, S.V. Measuring the Temperature of High Speed Gas Flow With the Aid of a Thermocouple	98
KLITIK, L.B.; OUL'YENKO, S.A.; and STRECHET, I.B. Regularities in the Formation of a Flame Front in a Free Stream	106
OUL'YENKO, S.A.; STRECHET, I.B.; and KLITIK, L.B. Investigation of the Combustion Process Behind a Flame Front in Turbulent Flow	114
KLITIK, L.B. and OUL'YENKO, S.A. Investigation of the Propagation Process of a Turbulent Flame Front at High Speeds of the Flow	121

SUNDUKOV, I. N. and CHEKALIN, E. K.

"Some Methods for Studying Two-Phase Fuel-Air Mixtures in a Flow."

report submitted for the 8th Intl. Symposium on Combustion,
Pasadena, California, 29 Aug - 2 Sept 1960.

32382
S/124/61/000/012/026/038
D237/D304

11 7200

AUTHORS: Predvoditelev, A. S., and Sundukov, I. N.
TITLE: On flame propagation in two-phase mixtures
PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 12, 1961,
100, abstract 12B699 (Tr. Odessk. un-ta, Ser.
Fiz. n., 1960, 150, no. 7, 45-54)

TEXT: The combustion of a two-phase system of vapors and droplets is investigated both theoretically and experimentally. One of the theoretically possible mechanisms of two-phase combustion in the conditions prevailing in the combustion chamber of an engine is considered. Assuming the mode of frontal combustion, the authors generalize complementary information on the formation and motion of combustion front. Experiments were performed in a special burner-atomizer. The percentage of liquid phase was determined from the number and size of droplet marks on the layer of soot deposited on the glass plate. The

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On flame propagation...

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velocity of flame propagation was determined from the angle of the photographed flame jets by means of the formula $g = W \sin \alpha / 2$, where W = mean velocity of the flow of mixture, and α -- interior angle of the flame jet. Relationships were obtained of the velocity of flame propagation g and general factor of air excess α for proportions of liquid phase in the total amount of fuel ranging from 0% (homogeneous mixture) to 60%. The experiment shows the strong influence of the presence of a liquid phase in a burning mixture on the velocity of flame propagation. During the theoretical investigation, a series of formulas was obtained for the velocity of propagation of the flame front which was assumed to consist of a front of conflagration and where the ratio of infinitesimal increments of the normal to the surface and of time was taken as the velocity of front propagation for the mean distance between the droplets. etc. It is argued that the combustion of a two-phase mixture can be considered as a chemical reaction of the 2nd order with respect to the coefficient of air excess. The possibility is

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D237/D304

On flame propagation...

shown of the extension of the formulas obtained to the case of turbulent combustion of homogeneous mixtures where the part of the droplets can be played by gas clusters in random motion, and it is noted that detailed knowledge of chemical kinetics is not necessary in this case. [Abstracter's note: Complete translation.]

X

Card 3/3

S/081/61/000/023/020/061

B117/B147

AUTHORS: Sundukov, I. N., Chekalin, E. K.

TITLE: Measurement of the mean velocity of sprayed-fuel drops in the flow of a fuel-air mixture

PERIODICAL: Referativny zhurnal. Khimiya, no. 23, 1961, 267, abstract 23169 (Tr. Odessk. un-ta, Ser. fiz. n. v. 150, no. 7, 1960, 55-64

TEXT: Methods of quantitative measurement of the liquid phase in the flow of a two- phase mixture, the measurement of distribution of drops according to size, and the determination of the total surface of drops by the method of light scatter were studied. Results of experiments made with Б-70 (B-70) gasoline are given. [Abstracter's note: Complete translation.] ✓

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31290

S/124/61/000/010/025/056

D251/D301

11.7350

AUTHORS: Chekalin, E.K. and Sundukov, I.N.

TITLE: Forced ignition of a current of a two-phase fuel-air mixture by an incandescent body

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 10, 1961, 81, abstract 10 B576 (Pr. Odes'k, un-tu. Ser. fiz. n., Tr. Odessk. un-ta, Ser. fiz. n., 1960, 150, no. 7, 66-73)

TEXT: The influence is considered of the parameters of flow of a two-phase mixture on the temperature of ignition by an incandescent body. The investigation was carried out on a special burner which permits variation of the ratio between the liquid and gaseous phases of the fuel, the dimension and velocity of the droplets in the stream. Tests were carried out with the coefficient of air excess equal to 0.56 and the velocity of the current of two-phase mixture equal to 16 m/sec. The igniter had the nature of a

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D251/D301

Forced ignition of a current...

nichrome cylinder 3 mm in diameter and 15 mm long. It is observed that the temperature of ignition of the mixture depends on the ratio between the liquid and gaseous phases of the fuel and on the dimensions and velocity of the droplets. The corresponding dependence relationships are established. [Abstracter's note: Complete translation]

Card 2/2

J

ACC NR: AT7000294

SOURCE CODE: UR/3142/60/150/007/0045/0054

AUTHOR: Predvoditelev, A. S.; Sundukov, I. N.

ORG: None

TITLE: Flame propagation in two-phase mixtures

SOURCE: Odessa. Universitet. Trudy, v. 150. Seriya fizicheskikh nauk, no. 7, 1960. Voprosy ispareniya i goreniya v dispersnom vide (Problems of evaporation and combustion in the dispersed state), 45-54

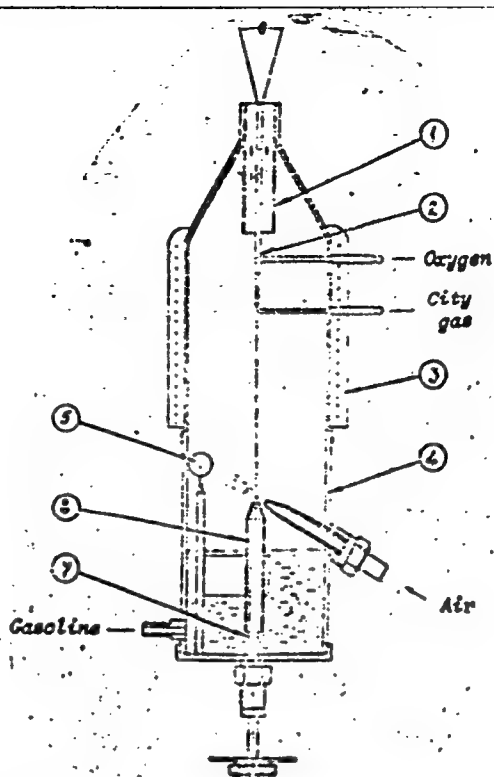
TOPIC TAGS: flame propagation, combustion kinetics, combustion chamber

ABSTRACT: The authors discuss one of the possible concepts of combustion of two-phase mixtures as a basis for a theoretical explanation of phenomena which take place in engine combustion chambers. Ignition of two-phase mixtures was studied with the help of the special vaporizing injection precombustion unit shown in the figure. Gasoline injected through atomizer 6 is directed by a jet of air against spherical deflector 5 to produce a finer fuel spray. The air and atomized fuel are mixed and fed to spray burner 1 13.3 mm in diameter. There the air is continuously ignited by gas-oxygen ignition source 2. Needle valve 7 is used for fuel flow regulation. Electric heater 3 surrounding the mixing chamber is used to control the amount of liquid phase in the mixture from 60% to zero. The lower section of the precombustion unit is made from

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ACC NR: AT7000294

plexiglass and graduated to show the amount of fuel consumed in a unit of time. A special device was used for determining the ratio of liquid phase to the total quantity of gasoline in the mixture with an error of 12%. The rate of flame propagation was determined from the apex angle θ microscopically measured on a considerable number of photographs, according to the formula $g = W \sin(\theta/2)$ where W is the average velocity of the mixture and g is the rate of motion of the flame. Formulas are derived for g in terms of time, temperature, distance between the drops in the fuel mixture and the surface area of the fuel particles.



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ACC NR: AT7000294

These formulas may be extended to turbulent combustion of homogeneous mixtures.
Orig. art. has: 3 figures, 13 formulas.

SUB CODE: 21/ SUBM DATE: None

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ACC NR: AT7000295

SOURCE CODE: UR/3142/60/150/007/0065/0073

AUTHOR: Chekalin, E. K.; Sundukov, I. N.

ORG: None

TITLE: Forced ignition of a stream of two-phase fuel-air mixture by an incandescent body

SOURCE: Odessa. Universitet. Trudy, v. 150. Seriya fizicheskikh nauk, no. 7, 1960. Voprosy ispareniya i goreniya v dispersnom vide (Problems of evaporation and combustion in the dispersed state), 65-73

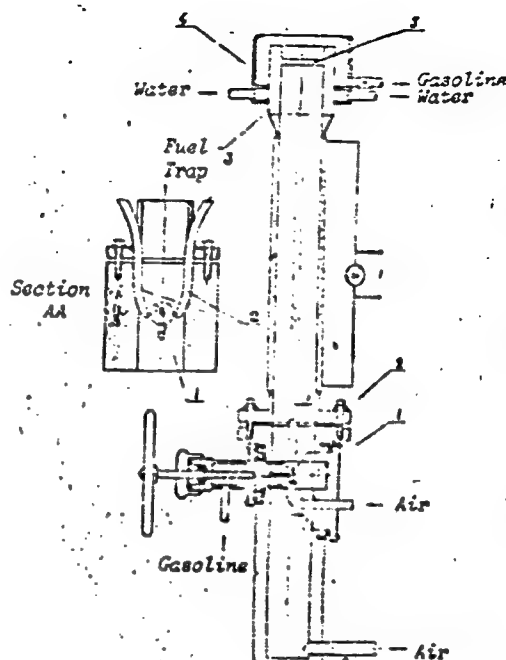
TOPIC TAGS: combustion kinetics, fuel ignition, liquid fuel, flow analysis

ABSTRACT: The authors study the temperature of forced ignition by an incandescent body as a function of various flow parameters of a two-phase mixture. A mixture with controllable parameters was produced by the special precombustion unit shown in the figure. This installation consists of a tube 20 mm in diameter closed at the lower end and made in two sections. The main air introduced at the bottom end perpendicular to the longitudinal axis determines the composition of the fuel-air mixture. This air moves upward washing over cylinder 1 10 mm in diameter and two tubes 2 as shown in section AA. After passing the cylinder, the air stream reaches the upper half of the precombustion unit and leaves the nozzle in the form of a cylindrical jet. Cylinder

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1 is an atomizer controlled by a needle valve. The fuel is atomized by the upper air jet and fed into the main air stream. Above cylinder 1 the fuel is partially mixed with the main air stream and partially settles on the inner walls of the upper half of the tube to form a liquid film which is moved upward by the air stream. The part of the fuel remaining in this film must be taken into account when calculating the composition of the two-phase mixture outside of the precombustion unit. This is done by placing annular slit 5 in the path of the film to connect the inner cavity of the precombustion unit with "fuel trap" 3. The liquid film is caught in this trap and sucked back into the flow in the lower part of the unit. In the case of extremely rich mixtures, a second



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fuel trap 4 made from plexiglass in the form of an annular vessel around the precombustion tube catches the excess fuel which is measured to correct the fuel concentration in the jet. The temperature of forced ignition was measured as a function of the ratio between the liquid and gaseous phases of the fuel, the average size and total area of the drop in a unit of flow and the average velocity of the drops in the stream. The results show that the temperature of forced ignition by an incandescent body in a stream of vaporized complex fuel is chiefly dependent on the velocity and average dimensions of the fuel drops. Orig. art. has: 4 figures, 1 table.

SUB CODE: 2140/SUBM DATE: None/ ~~CRI 1000 001~~/ OTH REF: ~~002~~ 003

Card 3/3

SUNDUKOV, N.A., kandidat pedagogicheskikh nauk; TUCHNIN, N.P., kandidat pedagogicheskikh nauk; BULATOVA, N.P., redaktor; TRESTNIKOV, V.N., redaktor; TUSHKEVICH, A.V., tekhnicheskii redaktor.

[Work in physics and engineering outside class] Vneklassnaia rabota po fizike i tekhnike. Pod red. N.P. Bulatova. Moskva, 1955. 138 p. (MLRA 8:9)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut teorii i istorii pedagogiki.
(Physics--Study and teaching)

SUNDUKOV, N.A.; SHCHUKIN, S.V.; BELOVA, M.L., redaktor; GARNIK, V.P.,
tekhnicheskii redaktor

[Experience with teaching general science in rural schools; a
collection of articles] Opyt politekhnicheskogo obucheniia v sel'skoi
shkole; sbornik statei. Pod red. S.V.Shchukina. Moskva, 1956 325 p.
(MIRA 10:1)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut teorii
i istorii pedagogiki.
(Technical education)

BULATOV, N.P.; SUNDUKOV, N.A.; SKATKIN, M.N., red.; KOPTEKOVA, L.A.,
red.; LAUT, V.G., tekhn.red.

[Technical instruction in a city school] Opyt politekhnicheskogo obucheniia v gorodskoi shkole. Pod red. M.N.Skatkina. Moskva, Izd-vo Akad.pedagog.nauk RSFSR, 1959. 164 p.

(MIRA 12:10)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut metodov obucheniya. 2. Chlen-korrespondent Akademii pedagogicheskikh nauk RSFSR (for Skatkin).

(Technical education)

SUNDUKOV, V. A. Cand Med Sci -- (diss) "Data on medicolegal diagnosis⁽⁻⁾ of acute poisoning with the ⁷¹⁰gas of multisulferous petroleum⁷¹⁰" AstBakhan', 1957. 11 pp 19 cm.
(Min of Health RSFSR. Stalingrad State Med Inst), 100 copies (KL, 13-57, 101)

KIY, V. [KyI, V.], starshiy nauchnyy sotrudnik; SUNDUKOV, Yu., starshiy
nauchnyy sotrudnik

Bioelectric stimulation. Nauka i zhyttia 12 no.7:42 J1 '62.
(MIRA 16:1)

1. Vychislitel'nyy chentr AN UkrSSR.
(Electrophysiology) (Electrotherapeutics)

38332 SUNDUKOVA, A. A., TRUIS, F. V., AND KLEBANOVA, A. A.

K voprosy o mekhanizme deystviya streptomitsina. Problemy tuberkuleza, 1949,
No 6, s. 48-50

SUNDUKOVA, L.I.; IL'IN, K.G.; VANINA, T.F.

Initial solubility in the ternary system $\text{LiCl} - \text{HClO}_4 - \text{H}_2\text{O}$.
 lev. vyz. uchek. zav.; knizn. i knizn. 1971. 10 s. 1600-1604
 ISSN 0013-788X

Водорастворимость; поликристаллический материал; перхлоратиды;
 катионная технология; программирование; спектры.

SUNDUK'YAN, G.S.; BOYARINOV, A.K., retsenzents; STARIKOV, A.Ya., retsenzents;
~~SIDOROV, A.G.~~, redaktor; TSEPLYAYEVA, Z.S., redaktor; LABUS, G.A.,
tekhnicheskii redaktor

[Warehouse economy and principles of storing crude hides and furs]
Skladskoe khoziaistvo i osnovy khraneniia zhivotnovodcheskogo syr'ia
i pushniny. Moskva, Gos. izd-vo tekhn. i ekon. lit-ry po voprosam
zagotovok, 1953. 275 p. (MLBA 10:1)
(Hides and skins--Storage)

BLUMENTAL', Samuil Yefimovich; SUNDUK'IAN, G. Stepanovich;
SIDOROV , A.G., redaktor; KRIVYAKIN, B.I., redaktor;
GOLUBKOVA, L.A., tekhredaktor

[Manual for officials in charge of purchases of unprocessed
livestock products and furs] Spravochnik zagotovitel'ia
zhivotnovodcheskogo syr'ia i pushniny. Izd. 2-oe, perer. Pod
red. A.G. Sidorova. Moskva, Izd-vo tekhn. i ekon. lit-ry po
voprosam zagotovok, 1956. 367 p. (MLRA 10:4)
(Fur) (Hides and skins)

SUNDUK'YAN, Grigoriy Stepanovich; BELOV, Konstantin Aleksandrovich; BLYU-
MENTAL', Samuil Yefimovich [deceased]; KRYUCHIKOV, S.M., red.; PAV-
LOVA, A.S., red. izd-va; POMICHEV, P.M., tekhn. red.

[Manual on the procurement of raw animal products and pelts] Poso-
bie dlia zagotovitel'ia zhivotnovodcheskogo syr'ia i pushniny. Mo-
skva, Izd-vo Tsentrosoiuz, 1961. 299 p. (MIRA 14:11)
(Animal products)

KHAVKUNOV, P.Ya.; SUNDUK'YAN, P.S.

Role of the slaughtering stations and slaughtering platforms
in the improvement of the quality of raw leather. Kozh.-ctuv
prom. 6 no.4:10-13 Ap'64. (MIRA 17:5)

GOLOVIN, A.A.; KARASEV, K.A.; SUNDYREV, I.A.

Some remarks on the processing of "iron hat" type ores by cyanidation.
Sbor. nauch. trud. Ural. politekh. inst. no.134:93-97 '63.

(MIRA 17:1)

SUNEC, Gordana, inz.

Cleaning of waste waters in the "Giba" Factory. Kem ind 9 no.12:
S-132 D '60.

1. "Pliva", Zagreb; clan Redakcionog odbora, "Sigurnost u pogonu"

SUNGAILE, Ya. Ya., and BIYEZIN, A. P., (Prof)--Riga

"Treatment of Chemical Burns of Esophagus in Children."

Report submitted for the 27th Congress of Surgeons of the USSR, Moscow,
23-28 May 1960.

SUNGAL, M.M.

Functional relationship between the average cost of electric power delivered to consumers. Nauch. dokl. vys. shkoly; energ. no.1:33-40
'58. (MIRA 11:10)

1.Rekomendovano Latvyskim gosudarstvennym universitetom.
(Electric power distribution)

SUNGARSKI, St.

Determination of discharge moduli and variation coefficients in
the Topolnitsa River Valley. Khidro i meteorolog no.5:35-42
'62.

SUNGARSKI, Stefan, inzh.

Hydrologic characteristics of the Topolnitsa River. Khidrotekhnika i melior 7 no.8:246-248 '62.

SUNGAPSKI, Stefan At.

Rainfall in the valley of Topolnitsa River up to the village
of Mukhovo. Khidro i meteorolog 5 45-51 '63.

AUTHOR: Sungatullin, Ya. G. (Eng.). SOV/97-58-7-7/10

TITLE: Results From Investigations of Pre-Cast and Pre-Cast-Monolithic Floor Slabs from Keramzit-Concrete, Reinforced With Pre-Stressed Reinforced Concrete Elements.
(Nekotoryye rezul'taty issledovaniya sbornykh i sbornomolitnykh perekrytiy iz keramzitobetona, armirovannykh predvaritel'no napryazhennymi zhelezobetonnyimi elementami).

PERIODICAL: Beton i Zhelezobeton, 1958, Nr.7. pp. 270 - 273. (USSR).

ABSTRACT: In 1957 two series of the above-mentioned slabs, with a span of 3.6 m, were investigated in the Laboratory for Reinforced Concrete Constructions for Housing Purposes of the Scientific Research Institute for Concrete and Reinforced Concrete, ASiA of USSR (Laboratoriya zhelezobetonnykh konstruktsey zhilykh i grazhdanskikh zdaniy Nauchno-issledovatel'skogo instituta betona i zhelezobetona ASiA SSSR). The slabs of the first series KP-3 and KP-4 were made from Keramzit-concrete with strength of 80 - 85 kg/cm², reinforced with three pre-stressed reinforced concrete elements 50 x 50 mm in cross section, positioned on edge. Types of slab of the second series KP-5 and KP-6 were made partly pre-cast monolithic slab with pre-stressed reinforced concrete slabs

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SOV/97-59-7-7/10

Results From Investigations of Pre-Cast and Pre-Cast-Monolithic Floor Slabs from Keramzit-Concrete, Reinforced With Pre-Stressed Reinforced Concrete Elements.

30 x 200 mm in cross section which also perform the function of formwork (see Table 1). The mix of the Keramzit-concrete was 1:2.3:5.35 and water/cement ratio = 0.76; 220 kg/m³ of cement Mk 400 were used. Concrete for pre-stressed reinforced concrete elements was of the mix 1:1.3:2.4, water/cement ratio = 0.4; 350 kg/m³ of cement Mk 600 were used. Table 1 gives technical data for various materials used. Fig.2 illustrates pre-stressing of reinforced concrete elements, and checking the value of contraction of the reinforcement. From 4 slabs investigated, 2 (KP-4 and KP-6) were tested to crushing point, and 2 (KP-3 and KP-5) to load exceeding the calculated by 20 - 40%. Graph 3 shows that deflection increases up to the point when cracks appear proportionately to the load. With further loading the deflection increases more than three times. The cracks appear in pre-stressed reinforced concrete elements when the load reaches the value of 1,176 kg/m². Fig.4 illustrates a graph of deflection of slabs KP-5 and KP-6 in the middle of the span. Tests show deflection of the

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SOV/97-58-7-7/10

Results From Investigations of Pre-Cast and Pre-Cast Monolithic Floor Slabs from Keramzit-Concrete, Reinforced With Pre-Stressed Reinforced Concrete Elements.

slab KP-3 increased by 1.5 mm after 112 days subjection to load of 820 kg/m^3 . Deflection of the slab KP-5 increased by 0.86 mm after 44 days subjection to load of 1060 kg/m^3 . Graph 5 illustrates increasing deflections taken in the middle of the span of slabs KP-3, KP-5 and KP-6. From this graph it can be observed that at the loading of $650 - 750 \text{ kg/m}^2$, Keramzit-concrete has a residual deformation in limits of 3.10^{-5} to $5.4.10^{-5}$. Tests showed that the appearance of cracks in the extreme fibres of the tensioned zone is in permissible limits. Graph 6 illustrates deformation slab KP-6 taken at various heights of the cross section. Evaluation of economical advantages of these slabs is discussed in detail. There are 6 Figures and 3 Tables.

1. Construction materials—Analysis
2. Reinforced concrete—Properties
3. Concrete—Properties
4. Construction materials—Test results

Card 3/3

SUNGATULLIN, Ya.G., inzh.

Study of the combined functioning of prestressed reinforced
concrete elements and keramzit concrete. Trudy NII prom.
zdan. i soor. no.3:43-71 '80. (MIRA 15:1)
(Precast concrete construction)

SUNGATULLIN, Ya.G., inzh.

Elasticity of keramzit concrete functioning under connected
deformations. Trudy NII prom. zdan. i soor. no.3:72-80
'60. (MIRA 15:1)

(Lightweight concrete)

SUNGATULLIN, Ya. G.

Cand Tech Sci - (diss) "Experimental study of the joint performance of pre-stressed reinforced concrete elements containing ceramic-concrete." Moscow, 1961. 20 pp; (Academy of Construction and Architecture USSR, Central Scientific Research Inst of Construction Designs); 150 copies; price not given; (KL, 6-61 sup, 226)

SUNGATULLIN, Ya.G., inzh.; ZOLOTUKHIN, V.G., inzh.; DOLINSKIY, N.V., inzh.

Flat slabs for floors and attic roofs made of lightweight
concrete. Bet. 1 zhel.-bet. no.11:504-507 N '61. (MIPA 16:2)

(Concrete slabs)

SUNGATULLIN, Ya.G., kand.tekhn.nauk

Continuous prestressed floor slabs made of keramsit concrete.
Bet.1 zhela-bet. 9 no.5:199-204 My '63. (MIRA 16:6)
(Concrete slabs--Testing) (lighthouse concrete)

SUNGATULLIN, Ya.G.; PONOMAREVA, V.I.

Rigidity of prestressed cellular concrete tile roofing under
lasting stress. Prom.stroi. 41 no.9:31-33 S '63. (MIRA 16:11)

SECRET
SUNGUROV, A.M.

Studies of deep structure of the Pitnyak region and its oil- and gas-bearing potential based on geophysical prospecting data. Geol. nefti 2 no.1:40-46 Ja '58. (MIRA 11:1)

1. Treat "Sredazneftegeofizika."
(Uzbek S.S.R.—Petroleum geology)
(Uzbek S.S.R.—Gas, Natural—Geology)

KORNEV, V.A.; LUTSUK, Ye.M.; SUNGUROV, A.M.

Basic characteristics of the tectonics of the Caspian Sea
based on marine geophysical data. Sov.geol. 5 no.12:80-99
D '62. (MIRA 16:2)

1. Nauchno-issledovatel'skaya morskaya geofizicheskaya
ekspeditsiya Vsesoyuznogo nauchno-issledovatel'skogo instituta
geofiziki.

(Caspian Sea region—Geology, Structural)

SUNGUROV, Aleksandr Nikolaevich; KHUNTSKARSKAYA, Ye.N., red.;
KOZLOVSKAYA, M.D., tekhn.red.

[Excursion guide to birds of European Russia; manual for teachers
of secondary schools] Ekskursionnyi opredelitel' ptits Evro-
paiskoi chasti SSSR; posobie dlia uchitelei srednei shkoly.
Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv.RSFSR, 1960. 233 p.
(MIRA 14:1)

(Birds--Identification)

Doc. No. 08/0259/00/052/011/1509/1591

Authors: G. A. G. A.; G. A. G. A.; G. A. G. A.

In: Research Institute for Ear, Nose, Throat, and Speech Disorders,
 (Nauka i izobreteniya) Institut po bolezniam ucha, nosa, gorla i rechi)

Title: Photoelectric instrument for recording nystagmus.

Source: Photoelectric instrument for recording nystagmus, v. 52, no. 11, 1989-1991

Subject: Nystagmus; reflex activity; nystagmus, *ophthalmology*

Abstract: A description is given of a nystagmograph consisting of a photoelectric sensor mounted in an eyeglass frame and a measuring bridge whose output is fed to a recording device. The frequency characteristic of the output signal from this battery-powered nystagmograph (1-20 cps) permits recording of both fast and slow eye

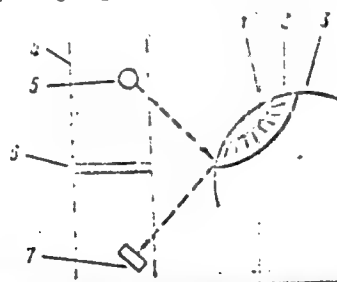


Fig. 1. Diagram of sensor

1 - Pupil; 2 - iris; 3 - sclera; 4 - body of sensor; 5 - bulb; 6 - screen, 7 - photoresistor.

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UDC: 612.846 (018)

1. 100-57

ACC Num A26035345

movements. The sensor, which is in a lightproof compartment, consists of a light source and a SFZ-1 photoresistor (see Fig. 1). The light beam from the sensor is directed so that it strikes the junction of the iris and sclera. Orig. art. has: 4 figures.

SUB CODE: 06, ~~227~~ SUBM DATE: 22Sep65/ ORIG REF: 008/ OTH REF: 005/ ATD PRESS: 5103

1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 26

On 10/17/68, [redacted] was interviewed by SA [redacted]. He stated that he had been in contact with the [redacted] since [redacted] and that he had been in contact with [redacted] since [redacted].

(U) (S)

• The following information was obtained from the above sources:

ACC NR: AP6032018

SOURCE CODE: UR/0386/66/004/006/0208/0210 4

AUTHOR: Kogan, L. M.; Libov, L. D.; Masledov, D. M.; Nikitina, T. F.; Orayevskiy, I. N.; Strakhovskiy, G. M.; Sungurova, O. A.; Tsarenkov, B. V.

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences, SSSR (Fizicheskii institut Akademii nauk SSSR)

TITLE: Continuous coherent radiation of epitaxial diodes of GaAs at 77K

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 4, no. 6, 1966, 208-210

TOPIC TAGS: gallium arsenide, epitaxial growing, pn junction, semiconductor laser, emission spectrum, recombination emission

ABSTRACT: The authors report continuous generation from a GaAs semiconductor laser with epitaxial pn junction operating with the medium at 77K. The junction was produced by liquid epitaxy by the method of H. Nelson (RCA Rev. v. 24, 603, 1963). The epitaxial layer was doped with tellurium to a density $\sim 5 \times 10^{18} \text{ cm}^{-3}$. A Fabry-Perot type resonator was produced by cleavage along the (110) plane. Emission values of the spectra of the same diode, obtained at different values of the exciting current, in pulsed or continuous operation, show that the maximum of the recombination spectrum shifts toward shorter wavelengths with increasing current; this shift is due to the "dispersal" of the Fermi quasilevels with increasing pump energy, and also to the shift to the long-wave section of the spectrum in the continuous mode, relative to

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ACC NR: AP6032018

the spectrum in the pulsed mode, connected with the constant heating of the active region in the continuous case. This difference between the spectra in the two modes is larger for small currents and decreases on approaching the threshold current. The latter effect is connected with the presence of deep electronic levels with very low state density. Coherent radiation in the continuous mode occurs at a current of 250 ma (612 a/cm²). The narrow spectral line appearing in this case corresponds most probably to the non-axial "annular" type of resonator oscillations. At 410 ma (1020 a/cm²), a new system of coherent lines appears, which can be interpreted as corresponding to axial modes of the cavity. The total emission power of the diode for which the spectra are presented is 5 mW at the appearance of the first coherent line and 70 mW at a current 1.5 a. Orig. art. has: 1 figure. [02]

SUB CODE: 20/ SUBM DATE: 13Jun66/ OTH REF: 002/ ATD PRESS: 5084

Card 2/2

24(0); 5(4); 6(2) PHASE I BOOK EXPLOITATION SOV/2215
 Vsesoyunnyy nauchno-issledovatel'skiy institut metrologii i
 D.I. Mendeleeva
 Referaty nauchno-issledovatel'skikh rabot: sbornik No. 2 (Scientific
 Research Abstracts: Collection of Abstracts, No. 2) Moscow,
 Standartgiz, 1955. 133 p. 1,000 copies printed.
 Additional Sponsoring Agency: USSR, Komitet standartov, mer i
 izmeritel'nykh priborov.
 Ed.: S. V. Reshetina; Tech. Ed.: M. A. Kondrat'yeva.

PURPOSE: These reports are intended for scientists, researchers,
 and engineers engaged in developing standards, measures, and
 gauges for the various industries.

COVERAGE: The volume contains 128 reports on standards of measure-
 ment and control. The reports were prepared by scientists of
 institutes of the Komitet standartov, mer i izmeritel'nykh
 priborov pri Sovete Ministerov SSSR (Commission on Standards,
 Measures, and Measuring Instruments under the USSR Council of
 Ministers). The participating institutes are: VNIIM -
 Vsesoyunnyy nauchno-issledovatel'skiy metrologii i
 D.I. Mendeleeva (All-Union Scientific Research Institute of Met-
 rology and Standards) in Leningrad; Sverdlovsk branch
 Institut Komiteta standartov, mer i izmeritel'nykh priborov
 (All-Union Scientific Research Institute of the Commission
 on Standards, Measures, and Measuring Instruments), created
 from MGIMP - Moskovskiy gosudarstvennyy institut mer i
 izmeritel'nykh priborov (Moscow State Institute of Measures
 and Measuring Instruments) October 1, 1955; VNIIT -
 Vsesoyunnyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh
 i radioelektricheskikh izmereniy i radio-ingenering
 Research Institute of Physico-Technical and Radio-engineering
 Measurements in Moscow; MGIMP - Moskovskiy gosudarstvennyy
 institut mer i izmeritel'nykh priborov (Moscow State Institute
 of Measures and Measuring Instruments); and MGIMP - Novosil-
 (Novosilskiy gosudarstvennyy institut mer i izmeritel'nykh priborov
 (Novosil State Institute of Measures and Measuring Instru-
 ments)). No personalities are mentioned. There are no references.

Xustova, Ye. M. (VNIIM). On the Accuracy of Conventional Cali-
 brations of Colorimeters for Three Colors and Four Chromaticities 110
 Yustova, Ye. M. (VNIIM). Studying Spatial Variation of Color 111
 Perception Under the Effect of Eye Adaptation
 Saburenkov, A. M. (VNIIM). Measuring Variable Values of Light 112
 Saburenkov, A. M. (VNIIM). Light Measurements for Fluorescent
 Lamps 113
 Physicochemical Measurements (Kosanova, M. P., Editor, Professor)
 Kespel's, I. I. (Sverdlovsk Branch of VNIIM). Designing a Potenti-
 metric Apparatus for Measuring pH 115
 Aleksandrov, V. A., Ye. V. Shestopalova, and Z. N. Zhuravskaya (Sverd-
 lovsk Branch of VNIIM). Development of a Quantitative Photolorimetric
 Micromethod for the Determination of Phosphorus and Manganese in
 Cast Iron and Steel 116
 Card 22/21

SIDOROV, I.N., kand. tekhn. nauk; SUNGUROVA, Z.N.; SHCHUKINA, N.A.

Study of gases in Ural coal deposits and amount of methane emanation
in mines. Trudy Gor.-geol. inst. UFAN SSSR no.31:59-82 '58.
(MIRA 12:9)

(Ural Mountain region--Mine gases)

SUNGUR'YAN, N. .

Increasing in number and skills. Pozh.delo 9 no.10:28-29 0
'63. (MIRA 16:12)

1. Predsedatel' soveta Dobrovol'nogo pozharnogo obshchestva
Armenyanskoj SSR, Yerevan.

POHELINA, Ye.A.; SUNI, Ye.E.

Cholangiography and manometry during surgery. Vest.khir.
no.1:45-50'63. (MIRA 16:7)

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta skoroy
pomoshchi imeni prof. I.I.Dzhanelidze (izpolnyayushciy obyazannosti
direktora - doktor med. nauk Ye.G.TSurinova, nauchnyy rukovoditel'
prof. A.N.Berkutov).

(BILE DUCTS—SURGERY) (BILE DUCTS—RADIOGRAPHY)

RITZ, Milana, dipl. inz.; SUNIC, Marija, dipl. inz.; FILAJDIC, Mirko, dr.
dipl. inz.

Colorimetric determination of methanol in spirit and branies.
Kem ind 13 no.4:267-273 Ap '64

1. Biotechnological Section of the Technological Faculty, Zagreb.
2. Member of the Board of Editors, "Kemija u industriji" (for Filajdic)

SUNIA, O. P.

Dissertation defended for the degree of Doctor of Philological Sciences
at the Institute of Linguistics 1962.

"The Verb in the Tunguso-Manchurian Languages. Morphological Structure and
System of Forms of Verbal Words."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

KUZMINSKIY, A. S., NIKITINA, T. S., ZHURAVSKAYA, E. V., OKSENT'YEVICH, L. A.,
SUNITSA, L. L., and VITUSEKIN, N. I.

M "The Effect of Ionizing Radiations on Crude and Vulcanized Rubbers."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic
Energy, Geneva, 1 - 13 Sep 58.

BREGER, A.Kh.; DEMBROVSKIY, M.A.; DMITRIYEV, L.A.; SUNITSA, L.L.;
RYABUKHIN, Yu.S.

Dose rate field of a cylindrical irradiator containing Co^{60}
a powerful source of γ -radiation. Probl.fiz.khim. no.2:
132-145 '59. (MIRA 13:7)
(Radiation—Dosage) (Cobalt—Isotopes)

KUZ'MINSKIY, A.S.; RUZER, L.S.; SUNITSA, L.L.; Primali uchastiye:
VINOGRADOV, V.V.; VITUSHKIN, N.I.; YEVLAMPIYEV, A.I.; OSIPOV, V.B.

Apparatus with a source of gamma rays of Co^{60} with 16,000 g-equivalent
of radium for radiochemical investigations of crude and vulcanized
rubbers. Kauch. i rez. 20 no.11:8-10 N '61. (MIRA 15:1)

1. Nauchno-issledovatel'skiy institut rezinoy promyshlennosti.
(Rubber) (Gamma rays)

1. 1.

Highly effective measure for the improvement of agriculture in
the country of Yugoslavia.

1. Vol. 1, no. 1, June 1954. (Sarajevo, Yugoslavia)

Monthly Journal of the European Academies (JEA) LC. Vol. 7, no. 1,
February 1954

11-11, Feb-11 TOP(c)/SSD(c)/ASTC(a)/

1. Title: "Elektrony, Miony, Engineering; Sunka, Pavel (Engineer)"

2. Subject: "Elektrony, Miony, Engineering; Sunka, Pavel (Engineer)"

SOURCE: Slaboproudy obzor, v. 25, no. 6, 1964, 328-335

TOPIC TAGS: space-charge-limited cathode current, electron gun, magnetic injector, vacuum acceleration, betatron, Czech betatron, electron emission,

ABSTRACT: The paper describes the theory and design of a coaxial high-voltage gun for a Czech 15 mev betatron. The purpose of the design was to increase the gamma radiation intensity and to reduce the number of rejects in vacuum acceleration. The gun is a combination of a slightly-divergent Pierce gun and a narrow-field electrostatic lens which accelerates the electrons up to an energy of 10 keV and still provides the requisite slight convergence to the beam. The current of the gun can be regulated within the limits 0 to 2×10^{-4} amps/volts with an approximate beam diameter of 5 mm. Experimental tests indicate

Card 1/2

Cherny, G. P. and G. P.

100th Anniversary of Trinec Ironworks of the Great October Socialist Revolution."

Intimp. Iron, G. P. and G. P. Vol. 9, no. 4, Apr. 1957.

100th Ann. of East European Accessions (Ch-1), 10, Vol. 4, No. 6, Jun 59, Unclas

10000

Receiving supplies on automatic loan. ATK-100. T-100. from, 12, No. 4, 1958.

9. Monthly List of Russian Accessions, Library of Congress, June 195¹₂, Uncl.

SUNKO, D.

Determining the power of fishing boat engines during their life of services, p. 6.
(Gozdarski vestnik, Vol. 9, No. 1, Jan. 1957, Ljubljana, Yugoslavia*)

So: Monthly List of East European Accessions (EEAL) Lc. Vol. 6, No. 8, Aug. 1957. Uncl.

γ-Benzoylacetoacetic acid (*β*,*β*-Dioxo-4-phenylvaleric acid). K. Balenović and D. Sunko (Univ. Zagreb, Jugoslavia). *Monatsh.* 79, 1-3(1948).—Dehydrobenzoylacetic acid (I) suspended in 400 cc. MeOH was treated with 200 cc. 45% KOH, in small portions and with cooling, allowed to stand 18 hrs. at 25°, 3 vols. ice H₂O added, the whole acidified to Congo red at 0°, extd. with Et₂O, the Et₂O exts. dried, the MeOH and Et₂O removed in vacuo, the crude residue (20-21 g.) dried over H₂SO₄ in a vacuum desiccator, dissolved in 80 cc. abs. Et₂O, and 100 cc. petr. ether (b. 30-80°) added. On cooling to 0° there was obtained 8-9 g. plates, m. 85-7°. Recrystn. from Et₂O-petr. ether gave BaCH₃COCH₂CO₂H (II), m. 94°, which gave a Boussines-red color with FeCl₃. II (0.30 g.) was heated 15 min. at 110°, cooled, treated with Et₂O, the Et₂O soln. washed with NaHCO₃ soln., concd., and the residue sublimed at 20 mm. and 110° to give 0.17 g. BaCH₃CO₂Me, m. 58-9°. II (1 g.) in 10 cc. concd. H₂SO₄ let stand at 0° 10 min., then poured on ice, gave 0.6 g.

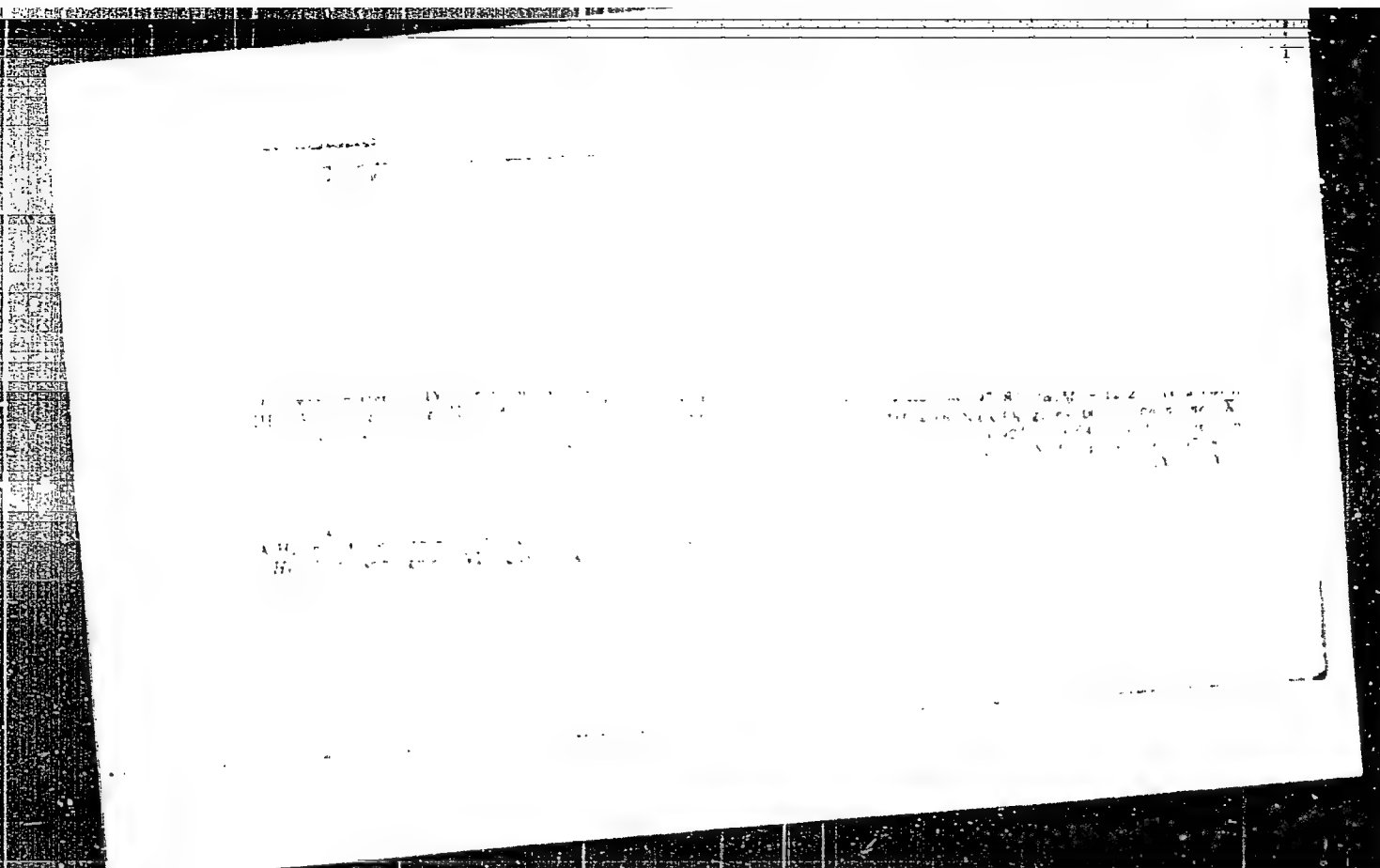
O.CO.CH₃.CO.CH₃:CPh, m. 245° (from aq. alc.). II (5 g.) in 6% alc. HCl after 24 hrs. at room temp. gave 1.35 g. III. The reported hydrolysis of I by mild alkali to give only BaCH₃CO₂H [Bayer and Perkin, *Ber.* 17, 64(1884)] could not be repeated since no exact exptl. details were given. Harry L. Yale

SUNCO, D.

Synthesis of β -phthalimidopropionaldehyde. I. Jambrić and D. Funko (Fac. nat. sci. math., Zagreb, Yugoslavia). *Chem. Abstr.* 73, 102-6 (1951) (English). — β -Phthalimidopropionyl chloride (15 g.) was reduced with H in 60 ml. boiling xylene with 3 g. of 5% Pd-BaSO₄. After 3 hrs. the reaction had reached 87% completion and came to a standstill; 11.6 g. (90%) of crude β -phthalimidopropionaldehyde was obtained; this, upon recrystn. from CCl₄, gave colorless needles, m. 118°, raised to 118.5-19° by sublimation at 110-15° at 0.016 mm.; semicarbazone, white prisms, m. 223.5-25°.

Werner Jacobson

11/25/51



YUGO?

The sphingolipids series. III. Preparation of sphingine by the catalytic reduction of tribenzoylsphingosine. M. Munk-Weinert, D. E. Sunde, and M. Prošienik (Univ. Zagreb, Yugoslavia). *J. Org. Chem.* 19, 378-80 (1954); *cf. C.A.* 49, 173g. Tribenzoylsphingosine (1.1 g.), m. 118-20°, is hydrogenated in 60 cc. EtOH with 200 mg. Adams' PtO₂ catalyst 3 hrs. at 24° and atm. pressure, the filtered soln. is evapd. in vacuo to dryness, the residue taken up in ether, and the washed (NaHCO₃, H₂O) ether soln. evapd., giving 72.4% O,N-dicyclohexanoylsphingosine (I), m. 60-1°, $[\alpha]_D^{25}$ 21.30° (c 2.30, CHCl₃). From the aq. washings, cyclohexanecarboxylic acid, m. 29-30°, is isolated. Heating 300 mg. I with 15 cc. N KOH-MeOH 1 hr. at 40° gives 84% N-cyclohexanoylsphingosine (II), platelets, m. 115.5-16°. Reducing 250 mg. I with 5 g. 10% H₂SO₄-MeOH 24 hrs. gives 85.1% D-sphingosine (III), m. 34-5°. Reducing similarly 90 mg. II with 10% H₂SO₄-MeOH gives 97% III, m. 66-7°, $[\alpha]_D^{25}$ -5.1° (c 3.14, CHCl₃). F. S. B.

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YUGO .

The reaction of α -phthalimidofosid chlorides with substituted additionalones. A method for the preparation of α -amino ketones and related compounds. D. E. Sunko and M. Prokhorov (Univ. Zagreb, Yugoslavia). *Ann. Chem. (Zagreb)* 1961 (in English). Bowman's method (C.A. 47, 26, 7-14 (1951) (in English)). A solution of 5 g. phthalidic ketones and acetone ketones. A soln. of 5 g. $\text{PhCH}_2\text{CH}(\text{CO}_2\text{Et})_2$ in 30 ml. C_6H_6 was added to 0.02 mole of dry NaOEt , then 4.32 g. PhCH_2OH was added, a $\text{C}_6\text{H}_5\text{CO}_2\text{Et}$ acetone:diethyl. off, a soln. of 4.43 g. α - $\text{C}_6\text{H}_5\text{CO}_2\text{Et}$ in C_6H_6 added to the residue, and the mixt. refluxed 30 min. and pourd. in 100 ml. ice water acidified with H_2SO_4 . The org. layer was sepl., the aq. layer extd. with C_6H_6 , the combined exts. washed with H_2O , dried and with C_6H_6 , the residue dissolved in 25 ml. dioxane, and 200 ml. EtOH added to give after scratching 2.4 g. (21.4%) α - $\text{C}_6\text{H}_5\text{CO}_2\text{Et}$ in C_6H_6 (from EtOH -dioxane). To a soln. of 25.2 g. 3,4-dihydro-2H-pyran in 100 ml. C_6H_6 contg. one

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drop H₂SO₄ (10.11 g. $\text{PCl}_5\text{CH}_2\text{CO}_2\text{H}$) (III) was added, the mixt. stirred 30 min., 4 g. anhyd. K₂CO₃ added, the mixt. stirred again 30 min., the soln. decanted from inorg. material, reprecip. in methanol below 30°, and the residue dissolved in 100 ml. CCl₄. This soln. was added to 2.3 g. Na, dissolved in 100 ml. CCl₄. The soln. stirred until dissolved, a soln. suspended in 200 ml. CCl₄ added slowly, let stand 1 hr., 10 of 21 g. I in 100 ml. CCl₄ added slowly, let stand with H₂O, ml. AcOH added, refluxed 2.5 hrs., washed with H₂O, evapd., the residue dissolved in 60 ml. EtOH and let stand 1 hr. to give 10 g. (36.1%) $\alpha\text{-C}_6\text{H}_5\text{CH}_2\text{CO}_2\text{H}$ (IV). The same compd. CH₃Ph (IV), m. 110.5° (from EtOH). The same compd. was prepd. by a 19-hr. hydrogenating 1 g. II in 50 ml. EtOAc over 1 g. 10% Pd-BaSO₄ at room pressure and temp., evapd. of solvent, and heating 30 min. at 100° in 98.8% yield; mp. 110.1° (from EtOH). A soln. of 11.55 g. CCl₄Br in 50 ml. CCl₄ was added to a soln. prepd. from 8 g. CCl₄CO₂Et₂ and NaOEt (from 1.45 g. Na) in 50 ml. CCl₄, refluxed 12 hrs., 100 ml. H₂O added and acidified with dil. HCl. The org. layer was sepd., dried, distilled, or run up to 130°/0.3 mm., a soln. of 15 g. KOH in 12 ml. H₂O added to the residue, hydrolysis effected by shaking, 100 ml. H₂O added, the mixt. acidified with 5N HCl, evapd. with Et₂O, added, residue crystd. from CCl₄ to give 8.9 g. (81%) $\alpha\text{-C}_6\text{H}_5\text{CH}_2\text{CO}_2\text{H}$ (V), m. 114-15°. A soln. of $\alpha\text{-C}_6\text{H}_5\text{CH}_2\text{CO}_2\text{H}$ (R = tetrahydro-2-pyrimidin) (prepd. from 8.50 g. V in the same manner as described for III) was added to 0.04 mole dry NaOEt, then 8.9 g. I in 50 ml. CCl₄ was added, let stand 2 hrs., 4 drops AcOH added, refluxed 3

[illegible]

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0.8 g. of IV, 4 ml. (HOCH₂)₂ and 0.02 g. p-MeC₆H₄SO₃H in 30 ml. PhMe was slowly stirred, collecting 10 ml. of distillate during 4 hrs., the residue washed with 2N NaHCO₃ and H₂O, dried and evapd. to give 0.34 g. ethylene ketal of IV, m. 114-18°; analytical sample 0.34 g., m. 125-5.5° (from EtOH). A soln. of 1 g. IV in 10 ml. AcOH was heated with 3 ml. HI (d. 1.80) for 10 hrs. on a steam bath, the solvent evapd. *in vacuo*, the residue dissolved in H₂O and extd. with CHCl₃, the aq. soln. concd. *in vacuo* and filtered, the filtrate evapd. *in vacuo*, the residue dissolved in abs. EtOH. Et₂O added, the solvent decanted, the dissolution and pptn. of crystals repeated twice, and finally crystd. from abs. EtOH-petr. ether to yield 0.32 g. of colorless needles of PhCH₂CH₂COCH₂NH₂·HI, m. 124-4°. This was dissolved in 1.5 ml. AcOH, 0.32 g. anhyd. NaOAc and 0.4 ml. BrCl was added, heated 10 min. on a steam bath and dilbd. with 15 ml. H₂O to give 0.29 g. PhCH₂CH₂COCH₂NH₂, m. 89.5-7.5° (from EtOH-H₂O 3:1); oxime, m. 151-2° (from C₆H₆). IV (3 g.) was reduced with 1.5 g. LiAlH₄ in 300 ml. Et₂O in a Soxhlet extractor to give 2.82 g. partly crystall. oil, which gave with (CO₂H)₂ in EtOH soln. the oxalate of o-C₆H₄CH₂·NCH₂CH(OH)CH₂CH₂Ph, m. 120°

SUNKO, D. R.
Yugoslavia/Organic Chemistry - Synthetic Organic Chemistry, 8-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 813

Author: Sunko, D. R. and Vujanovic, N.

Institution: None

Title: 2-hexadecynoic Acid

Original
Periodical: Arhiv. kemiju, 1955, Vol 27, No 4, 217-218 (published in English
with a Serbo-Croatian summary)

Abstract: To a solution of $C_{12}H_{25}MgBr$ in ether (0.315 moles of $C_{12}H_{25}Br$) are added 0.3 moles of $CH_2 = CBrCH_2Br$; the mixture is refluxed for 4 hours and hydrolyzed with dilute HCl . The yield of 2-bromo-1-pentadecyne (I) is 35%, bp $92^{\circ}/0.15$ mm, $n_D^{20} = 1.4690$. Thirty-nine grams of I are added (one hour at 140°) to a sample of NH_2Na (from 8.8 gms Na) dissolved in 270 ml of xylene; the mixture is refluxed for 10 hours, after which ice and concentrated HCl are added, and the 1-pentadecyne (II) is extracted with ether. The yield is 49.1%, bp $88^{\circ}/0.25$ mm, $n_D^{20} = 1.4545$; 13.8 gms of II are added to an ether solution of

Ca Card 1/2

which 100 mg. of
in the presence of 100 mg. of
mm. 3 hrs. gives 100 mg. (1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100)
octadecane (VIII), needles, m. 44-5°, lit. 63-64° (6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100)
Adducts: 100 mg. with starting 32 g. phthaloyl-p-phenyl

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CIA-RDP86-00513R001653920007-8

APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653920007-8"

SUNKO, D. F.

Distr: 4E'd

Nature of the intermediates in the S_N1 type reactions of cyclopropylmethyl derivatives. Solvolysis of deuteriated cyclopropylmethylbenzene sulfonates. S. Borčić, Miss M. Nisaković, and D. F. Sunko (Inst. Rudjer Bosković, Zagreb, Yugoslavia) *Chem. & Ind. (London)* 1960, 537-8.—The

benzenesulfonates of CD₃CD₂CHCH₂OH (I), RCD₂OH (R = cyclopropyl) (II), and RCH₂OH (III) were solvolyzed with anhyd. EtOH and anhyd. HOAc and the 1st order rate consts. detd. at 20.0° (benzenesulfonate deriv., $k \times 10^4/\text{sec.}$ in EtOH, k_H/k_D , $k \times 10^4/\text{sec.}$ in HOAc and k_H/k_D given): I, 6.25 ± 0.07 , 1.99, 2.24 ± 0.09 , 1.00; II, 4.34 ± 0.11 , 1.42, 1.68 ± 0.04 , 1.34; III, 6.17 ± 0.10 , —, 2.24 ± 0.04 , —. If the rate in S_N1 type reactions of cyclopropylmethyl derivs. were detd. by formation of a cyclobutenium ion, this step should involve some rehybridization of the C—H bonds on all methylene C atoms. Thus, solvolysis of the benzenesulfonate of I should show a kinetic isotope effect comparable with that of II. If, alternatively, a cyclopropylmethyl carbonium ion were formed with consequent rapid rearrangement to the isomeric classical or nonclassical carbonium ions, then no isotope effect should occur with I. According to the exptl. data, there was no indication of a nonclassical cyclobutenium ion intermediate in the rate-detg. step.

Rip G. Rice

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1-BW(BW)
2-JJ (NB) (GAY)
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BORGIC, S.; BELANIC-LIPOVAC, V.; SUNKO⁰, D.E.

Secondary hydrogen isotopes effects. III. Acetolysis of endo- and exo-norbornyl-5,6-d₂ p-bromobenzenesulfonates. Croat chem acta 33 no.1:35-39 1961.²

1. Institute "Ruder Boskovic", Zagreb, Croatia, Yugoslavia.

BORCIC, S.; SINKO, D.E.

Secondary hydrogen isotopes effects. V. Internal rearrangement in the acetolysis of deuterium labeled cyclopropylmethyl benzene-sulfonates. Croat chem acta 33 no.2:77-81 '61.

1. Institute "Ruder Boskovic", Zagreb, Croatia, Yugoslavia;
Members of the Editorial Board, "Croatica chemica acta, Arhiv
za kemiju"

SUNKOV, K M

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212-K. Welding Medium-Carbon Steel With "T.M.-7" Electrodes. (In Russian.) A. S. Shapiro and K. M. Sun'kov. Antroprene Doto (Welding), Nov. 1968, p. 21-28.

Applicability of above electrodes—originally designed for welding low-carbon steel—to welding of medium-carbon steel was investigated. Results of mechanical tests of the welds. Composition of electrodes. (Kl. CN)

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A052/A002

Translation from: Referativnyy zhurnal, Elektrotehnika, 1959, No. 15, pp. 175-176, # 32200

AUTHOR: Suntsev, M.

TITLE: Temperature Control Station on Semiconductors

PERIODICAL: Prom.-ekon. byul. Sovnarkhoz Permsk. ekon. adm. r-na, 1958, No. 7, p. 23

TEXT: The central temperature control station is designed for keeping press molds in plastic workshops automatically at a desired temperature. "T0C" (TOS) thermistors are used in the circuit of the station. The station consists of the following units: an electronic bridge, a pickup, a logometer, a switching device consisting of two "ШМ-50/4 (ShI-50/4) and 84 step selectors, a "MKY-48" (MKU-48) relay and a power unit. The station is designed to control 40 press molds. The measurement and control are done by the electronic bridge. The commutation switching of the points to be measured is performed by the step selectors which connect the points to the electronic bridge; the latter issues

Card 1/2

83539

S/112/59/000/015/053/068

A052/A002

Temperature Control Station on Semiconductors

through the control unit a command for switching on or off the heating. A visual check of the temperature with the logometer is possible. When the thermistor is connected to the input of electronic bridge a bulb flashes showing the press mold whose temperature is measured. There are 2 illustrations. ✓

A.B.K.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

1. SUNTSEVA, T. S.
2. USSR (600)
4. Stock Inspection
7. Seminar for veterinary specialists in food inspection.
Veterinariia 29 No. 12, 1952

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

SUNTSEVA, T. S.

The instruction on food preservation technology should be revised.
Khol.tekh.33 no.2:32-34 Ap-Je '56. (MIRA 9:9)
(Food--Preservation)